What is claimed is:

1. A purified and isolated CEL II or CEL I endonuclease protein.

2. The isolated CEL II endonuclease of claim 1, wherein said CEL II endonuclease is substantially free of CEL I endonuclease.

3. The isolated CEL I endonuclease of claim 1, wherein said CEL I endonuclease is substantially free of CEL II endonuclease.

4. A method for preparing an isolated CEL I or CEL II endonuclease protein of claim 1 comprising:

a) extracting proteins from a sample;

b) separating the proteins by concanavalin A affinity chromatography;

c) separating the product of step (b) by anion exchange chromatography; and

d) separating the product of step (c) by Heparin affinity chromatography so that a CEL I or CEL II protein is isolated.

5. The method of claim 4, further comprising separating the product of step (d) by one or more Heparin affinity chromatography steps.

6. The method of claim 4, wherein the sample is of plant origin.

7. The method of claim 6, wherein the plant is celery.

8. A method for separating CEL I and CEL II in a mixture comprising subjecting a mixture containing CEL I and CEL II to heparin affinity chromatography so that CEL I and CEL II are separated.

9. A composition comprising isolated CEL II endonuclease.

10. The composition of claim 9, wherein CEL II endonuclease is at a specific activity of greater than 10,000,000 units per mg protein as determined by DNA solubilization at pH 8.5.

11. A method for detecting the presence of mismatches in double-stranded DNA comprising contacting a sample containing double-stranded DNA with an isolated CEL II endonuclease, separating the product of the CEL II endonuclease digestion, and detecting said product wherein an increase in the number of DNA fragments generated in the presence of the CEL II endonuclease is indicative of a mismatch in said DNA.

12. A kit for detecting the presence of mismatches in double-stranded DNA comprising an isolated CEL II endonuclease enzyme.